## **IN THE CLAIMS**

7)

## 1-20 (Cancelled)

21. (New) A compound of Formula (I) or a pharmaceutically acceptable salt thereof:

Formula (I)

wherein Ar is a nitrogen-containing heteroaromatic ring group selected from the group consisting of a pyridyl group, a pyrimidinyl group, a pyrazinyl group, a pyridazinyl group, a thiazolyl group, an isothiazolyl group, an oxazolyl group, an isoxazolyl group, a pyrrazolyl group, an imidazolyl group, an indolyl group, an isoindolyl group, a quinolyl group, an isoquinolyl group, a benzothiazolyl group, and a benzoxazolyl group,

#### wherein:

- (1) Ar is optionally substituted with one to three of the same or different substituent(s) selected from (1-1) and (1-2):
- (1-1) a substituent selected from the group consisting of a lower alkyl group, a hydroxyl group, a cyano group, a halogen atom, a nitro group, a carboxyl group, a carbamoyl group, a formyl group, a lower alkanoyl group, a lower alkanoyloxy group, a hydroxy lower alkyl group, a cyano lower alkyl group, a halo lower alkyl group, a carboxy lower alkyl group, a carbamoyl lower alkyl group, a lower alkoxy group, a lower alkoxycarbonyl group, a lower alkoxycarbonylamino group, a lower alkoxycarbonylamino lower alkyl group, a lower alkylcarbamoyl group, a di-lower

alkylcarbamoyl group, a carbamoyloxy group, a lower alkylcarbamoyloxy group, a dilower alkylcarbamoyloxy group, an amino group, a lower alkylamino group, a di-lower alkylamino group, a tri-lower alkylammonio group, an amino lower alkyl group, a lower alkylamino lower alkyl group, a di-lower alkylamino lower alkyl group, a tri-lower alkylammonio lower alkyl group, a lower alkanoylamino group, an aroylamino group, a lower alkanoylamidino lower alkyl group, a lower alkylsulfinyl group, a lower alkylsulfonyl group, a lower alkylsulfonylamino group, a hydroxyimino group and a lower alkoxyimino group,

and

(1-2) a substituent which is a group represented by the formula  $Y_1$ - $W_1$ - $Y_2$ - $R_p$ , wherein:

R<sub>p</sub> is:

- (i) a hydrogen atom;
- (ii) a lower alkyl group, a lower alkenyl group or a lower alkynyl group, each of which is optionally substituted with one to three of said substituent(s) defined in (1-1) above; or
- (iii) a cyclo lower alkyl group, an aryl group, a heteroaromatic ring group selected from the group consisting of an imidazolyl group, an isoxazolyl group, an isoquinolyl group, an isoindolyl group, an indazolyl group, an indolyl group, an indolizinyl group, an isothiazolyl group, an ethylenedioxyphenyl group, an oxazolyl group, a pyridyl group, a pyrazinyl group, a pyrimidinyl group, a pyridazinyl group, a pyrazolyl group, a quinoxalinyl group, a quinolyl group, a dihydroisoindolyl group, a dihydroindolyl group, a thionaphthenyl group, a naphthyridinyl group, a phenazinyl

group, a benzoimidazolyl group, a benzotriazolyl group, a benzofuranyl group, a thiazolyl group, a thiadiazolyl group, a thienyl group, a pyrrolyl group, a furyl group, a furazanyl group, a triazolyl group, a benzodioxanyl group and a methylenedioxyphenyl group, or an aliphatic heterocyclic group selected from the group consisting of an isoxazolinyl group, an isoxazolidinyl group, a tetrahydropyridyl group, an imidazolidinyl group, a tetrahydrofuranyl group, a tetrahydropyranyl group, a piperazinyl group, a piperidinyl group, a pyrrolidinyl group, a morpholino group, a tetrahydroquinolinyl group and a tetrahydroisoquinolinyl group; each of which cyclic groups is optionally substituted with one to three of said substituent(s) as defined in (1-1) above, or furthermore, has optionally a bicyclic or tricyclic fused ring of a partial structure selected from the group consisting of:

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 ,  $\bigcirc$  and  $\bigcirc$ 

 $W_1$  is a single bond, an oxygen atom, a sulfur atom, SO, SO<sub>2</sub>, NR<sub>q</sub>, SO<sub>2</sub>NR<sub>q</sub>, N(R<sub>q</sub>)SO<sub>2</sub>NR<sub>r</sub>, N(R<sub>q</sub>)SO<sub>2</sub>, CH(OR<sub>q</sub>), CONR<sub>q</sub>, N(R<sub>q</sub>)CO, N(R<sub>q</sub>)CONR<sub>r</sub>, N(R<sub>q</sub>)COO, N(R<sub>q</sub>)COO, N(R<sub>q</sub>)COO, C(R<sub>q</sub>)=CR<sub>r</sub>, C=C, CO, CS, OC(O), OC(O)NR<sub>q</sub>, OC(S)NR<sub>q</sub>, SC(O), SC(O)NR<sub>q</sub> or C(O)O, wherein:

 $R_q$  and  $R_r$  are each independently:

- (iv) a hydrogen atom, or
- (v) a substituent selected from the group consisting of a lower alkyl group, a cyclo lower alkyl group, a hydroxyl group, a cyano group, a halogen atom, a nitro group, a carboxyl group, a carbamoyl group, a formyl group, a lower

alkanoyl group, a lower alkanoyloxy group, a hydroxy lower alkyl group, a cyano lower alkyl group, a halo lower alkyl group, a carboxy lower alkyl group, a carbamoyl lower alkyl group, a lower alkoxycarbonyl group, a lower alkoxycarbonylamino group, a lower alkoxycarbonylamino lower alkyl group, a lower alkylcarbamoyl group, a di-lower alkylcarbamoyloxy group, a lower alkylcarbamoyloxy group, a di-lower alkylcarbamoyloxy group, an amino group, a lower alkylamino group, a di-lower alkylamino group, a tri-lower alkylammonio group, an amino lower alkyl group, a lower alkylamino lower alkyl group, a tri-lower alkylamino lower alkyl group, a lower alkylamino group, an aroylamino group, a lower alkylamino lower alkyl group, a lower alkylamino group, a lower alkylsulfinyl group, a lower alkylsulfonyl group, a lower alkylsulfonylamino group, a hydroxyimino group and a lower alkoxyimino group, or

(vi) a lower alkyl group, an aryl group or an aralkyl group which is optionally substituted with one to three of said substituent(s) as defined in (v);

Y<sub>1</sub> and Y<sub>2</sub> are each, the same or different, a single bond or a straight-chain or branched lower alkylene group which optionally has said bicyclic or tricyclic fused ring;

or,

(2) Ar is optionally fused to a five- to seven-membered ring selected from the group consisting of:

$$\bigcirc, \bigcirc, \bigcirc, \bigcirc, \bigcirc, \bigcirc, \bigcirc, \bigcirc, \bigcirc, \bigcirc$$

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$$\bigcirc, \bigcirc, \bigcirc, \bigcirc, \bigcirc, \bigcirc$$

$$\bigcirc, \bigcirc, \bigcirc, \bigcirc, \bigcirc, \bigcirc$$

which ring is formed by two adjacent carbon atoms of said nitrogen-containing heteroaromatic cyclic group, which carbon atoms are each bonded to a ring-substituent through a carbon atom, an oxygen atom and/or a nitrogen atom of said ring-substituent selected from the group consisting of a lower alkyl group, a lower alkanoyl group, a lower alkyl group, a hydroxy lower alkyl group, a cyano lower alkyl group, a halo lower alkyl group, a carboxy lower alkyl group, a carbamoyl lower alkyl group, a lower alkoxy group, a lower alkoxycarbonylamino group, a lower alkoxycarbonylamino lower alkyl group, a lower alkylcarbamoyl group, a di-lower alkylcarbamoyl group, a carbamoyloxy group, a lower alkylcarbamoyloxy group, di-lower alkylcarbamoyloxy group, an amino group, a lower alkylamino group, a tri-lower alkylamino lower alkyl group, a di-lower alkylamino lower alkyl group, a lower alkylamino lower alkyl group, a lower alkylamino group, an aroylamino group, a lower alkylsulfinyl group, a lower alkylsulfonyl group, a lower alkylsulfonylamino group, and a lower alkanoylamidino lower alkyl group;

or,

(3) Ar is optionally fused to a five- to seven-membered ring selected from the group consisting of:

$$\bigcirc, \bigcirc, \bigcirc, \bigcirc, \bigcirc, \bigcirc, \bigcirc, \bigcirc, \bigcirc, \bigcirc$$

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which ring is formed by two adjacent carbon atoms of said nitrogen-containing heteroaromatic cyclic group, which carbon atoms are each bonded to a ring-substituent through a carbon atom, an oxygen atom and/or a nitrogen atom of said ring-substituent represented by the formula  $Y_1$ - $W_1$ - $Y_2$ - $R_p$ , wherein  $Y_1$ ,  $W_1$ ,  $Y_2$  and  $R_p$  have the same meanings as stated above;

## Y is CO, SO or SO<sub>2</sub>;

wherein the 1,3-oxazine ring in the compound of Formula (I) is optionally further fused with any one of a cyclo lower alkyl group, an aryl group, a heteroaromatic ring group selected from the group consisting of an imidazolyl group, an isoxazolyl group, an isoquinolyl group, an isoindolyl group, an indazolyl group, an indolyl group, an indolydinyl group, an isothiazolyl group, an ethylenedioxyphenyl group, an oxazolyl group, a pyridyl group, a pyrazinyl group, a pyrimidinyl group, a pyridazinyl group, a pyrazolyl group, a quinoxalinyl group, a quinolyl group, a dihydroisoindolyl group, a dihydroindolyl group, a thionaphthenyl group, a naphthyridinyl group, a phenazinyl group, a benzoimidazolyl group, a benzoxazolyl group, a benzothiazolyl group, a benzotriazolyl group, a benzofuranyl group, a thiazolyl group, a thiadiazolyl group, a thienyl group, a pyrrolyl group, a furyl group, a furazanyl group, a triazolyl group, a benzodioxanyl group and a methylenedioxyphenyl group, or an aliphatic heterocyclic group(s) selected from the group consisting of an isoxazolinyl group, an isoxazolidinyl group, a tetrahydropyridyl group, an imidazolidinyl group, a tetrahydrofuranyl group, a tetrahydropyranyl group, a piperazinyl group, a piperidinyl group, a pyrrolidinyl group, a pyrrolinyl group, a morpholino group, a tetrahydroquinolinyl group and a tetrahydroisoquinolinyl group,

### and

wherein the 1,3-oxazine ring in the compound of the Formula (I) is optionally substituted with one to three of the same or different substituent(s) selected from the group consisting of a lower alkyl group, a spiro cyclo lower alkyl group which is optionally substituted, a hydroxyl group, a cyano group, a halogen atom, a nitro group, a carboxyl group, a carbamoyl group, a formyl group, a lower alkanoyl group, a lower alkanoyloxy group, a hydroxy lower alkyl group, a cyano lower alkyl group, a halo lower alkyl group, a carbamoyl lower alkyl group, a lower alkoxy group, a lower alkoxy group, a lower alkoxy group, a lower alkoxycarbonyl group, a lower alkoxycarbonyl group, a lower

alkoxycarbonylamino lower alkyl group, a lower alkylcarbamoyl group, a di-lower alkylcarbamoyl group, a carbamoyloxy group, a lower alkylcarbamoyloxy group, a di-lower alkylcarbamoyloxy group, an amino group, a lower alkylamino group, a di-lower alkylamino lower alkyl group, a lower alkylamino lower alkyl group, a di-lower alkylamino lower alkyl group, a tri-lower alkylamino lower alkyl group, a lower alkylamino group, an aroylamino group, a lower alkylamino lower alkyl group, a lower alkylsulfinyl group, a lower alkylsulfinyl group, a lower alkylsulfonyl group, a lower alkylsulfonyl group, a lower alkylsulfonylamino group, a hydroxyimino group and a lower alkoxyimino group; or a substituent represented by the formula Y<sub>1</sub>-W<sub>1</sub>-Y<sub>2</sub>-R<sub>p</sub>, wherein R<sub>p</sub>, W<sub>1</sub>, Y<sub>1</sub> and Y<sub>2</sub> have the same meanings as stated above,

 $R_4$  and  $R_5$  are each, the same or different, a hydrogen atom, a halogen atom, a hydroxy group, an amino group, or a substituent represented by the formula  $Y_3$ - $W_2$ - $Y_4$ - $R_s$ ,

#### wherein:

R<sub>s</sub> is a hydrogen atom; a lower alkyl group, a lower alkenyl group, a lower alkynyl group, a cyclo lower alkyl group, an aryl group; a heteroaromatic ring group selected from the group consisting of an imidazolyl group, an isoxazolyl group, an isoquinolyl group, an isoindolyl group, an indolyl group, an indolyl group, an isothiazolyl group, an ethylenedioxyphenyl group, an oxazolyl group, a pyridyl group, a pyradinyl group, a pyrimidinyl group, a pyridazinyl group, a pyrazolyl group, a quinoxalinyl group, a quinolyl group, a dihydroisoindolyl group, a dihydroindolyl group, a thionaphthenyl group, a naphthyridinyl group, a phenazinyl group, a benzotniazolyl group, a benzotniazolyl group, a benzotniazolyl group, a benzotniazolyl group, a thiadiazolyl group, a thienyl group, a pyrrolyl group, a furyl group, a furazanyl group, a triazolyl group, a benzodioxanyl group and a methylenedioxyphenyl group; or an aliphatic heterocyclic group selected from the group consisting of an isoxazolinyl group, an isoxazolidinyl group, a tetrahydropyridyl group, a piperazinyl group, a piperidinyl group, a pyrrolidinyl group, pyrrolinyl group, a

morpholino group, a tetrahydroquinolinyl group and a tetrahydroisoquinolinyl group; each of which is optionally substituted with one to three of said substituent(s) as defined in (1-1) above;

 $W_2$  is a single bond, an oxygen atom, a sulfur atom, SO, SO<sub>2</sub>, NR<sub>t</sub>, SO<sub>2</sub>NR<sub>t</sub>, N(R<sub>t</sub>)SO<sub>2</sub>NR<sub>u</sub>, N(R<sub>t</sub>)SO<sub>2</sub>, CH(OR<sub>t</sub>), CONR<sub>t</sub>, N(R<sub>t</sub>)CO, N(R<sub>t</sub>)CONR<sub>u</sub>, N(R<sub>t</sub>)COO, N(R<sub>t</sub>)COO, N(R<sub>t</sub>)COS, C(R<sub>v</sub>)=CR<sub>r</sub>, C=C, CO, CS, OC(O), OC(O)NR<sub>t</sub>, OC(S)NR<sub>t</sub>, SC(O), SC(O)NR<sub>t</sub> and C(O)O, wherein:

R<sub>t</sub> and R<sub>u</sub> are each independently:

(vii) a hydrogen atom, or

(viii) a substituent selected from the group consisting of a lower alkyl group, a hydroxy group, a cyano group, a halogen atom, a nitro group, a carboxyl group, a carbamoyl group, a formyl group, a lower alkanoyl group, a lower alkanoyloxy group, a hydroxy lower alkyl group, a cyano lower alkyl group, a halo lower alkyl group, a carboxy lower alkyl group, a carbamoyl lower alkyl group, a lower alkoxy group, a lower alkoxycarbonyl group, lower alkoxycarbonylamino a group, lower alkoxycarbonylamino lower alkyl group, a lower alkylcarbamoyl group, a di-lower alkylcarbamoyl group, a carbamoyloxy group, a lower alkylcarbamoyloxy group, a dilower alkylcarbamoyloxy group, an amino group, a lower alkylamino group, a di-lower alkylamino group, a tri-lower alkylammonio group, an amino lower alkyl group, a lower alkylamino lower alkyl group, a di-lower alkylamino lower alkyl group, a tri-lower alkylammonio lower alkyl group, a lower alkanoylamino group, an aroylamino group, a lower alkanoylamidino lower alkyl group, a lower alkylsulfinyl group, a lower alkylsulfonyl group, a lower alkylsulfonylamino group, a hydroxyimino group and a lower alkoxyimino group;

or

(ix) a lower alkyl group, an aryl group or an aralkyl group which is optionally

substituted with one to three of said substituent(s)) as defined in (1-1) above;

Y<sub>3</sub> and Y<sub>4</sub> are each, the same or different, a single bond or a straight-chain or branched lower alkylene group, or

a substituent selected from the group consisting of a lower alkyl group, an aryl group or an aralkyl group which is optionally substituted with one to three of the same or different substituent(s) selected from the groups consisting of a lower alkyl group, a cyano group, a nitro group, a carboxyl group, a carbamoyl group, a formyl group, a lower alkanoyl group, a lower alkanoyloxy group, a hydroxy lower alkyl group, a cyano lower alkyl group, a halo lower alkyl group, a carboxy lower alkyl group, a carbamoyl lower alkyl group, a lower alkoxy group, a lower alkoxycarbonyl group, a lower alkoxycarbonylamino group, a lower alkoxycarbonylamino lower alkyl group, a lower alkylcarbamoyl group, a di-lower alkylcarbamoyl group, a carbamoyloxy group, a lower alkylcarbamoyloxy group, di-lower alkylcarbamoyloxy group, an amino group, a lower alkylamino group, a di-lower alkylamino group, a tri-lower alkylammonio group, an amino lower alkyl group, a lower alkylamino lower alkyl group, a di-lower alkylamino lower alkyl group, a tri-lower alkylammonio lower alkyl group, a lower alkanoylamino group, an aroylamino group, a lower alkanoylamidino lower alkyl group, a lower alkylsulfinyl group, a lower alkylsulfonyl group, a lower alkylsulfonylamino group, a hydroxyimino group and a lower alkoxyimino group, and the group represented by the formula Y<sub>3</sub>-W<sub>2</sub>-Y<sub>4</sub>-R<sub>s</sub>, wherein R<sub>s</sub>, W<sub>2</sub>, Y<sub>3</sub> and Y<sub>4</sub> have the same meanings as stated above.

**22.** (New) The compound according to claim 21, having a structure of Formula (I-a), or a pharmaceutically acceptable salt thereof:

Formula (I-a)

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wherein Ar<sub>a</sub> is a nitrogen-containing heteroaromatic ring group selected from the group consisting of a pyridyl group, a pyrimidinyl group, a pyrazinyl group, a pyridazinyl group, a thiazolyl group, a pyrazolyl group, and an imidazolyl group;

wherein:

(1') Ar<sub>a</sub> is optionally substituted with one to three of the same or different substituent(s) selected from (1'-1) and (1'-2):

(1'-1) a substituent selected from the group consisting of a lower alkyl group, a hydroxyl group, a halogen atom, a formyl group, a lower alkanoyl group, a lower alkanoyloxy group, a hydroxy lower alkyl group, a halo lower alkyl group, a carbamoyl lower alkyl group, a lower alkoxycarbonyl group, a lower alkoxycarbonylamino group, a lower alkoxycarbonylamino lower alkyl group, a lower alkylcarbamoyl group, a lower alkylcarbamoyloxy group, an amino group, a lower alkylamino group, a di-lower alkylamino group, an amino lower alkyl group, a lower alkylamino lower alkyl group, a lower alkylamino lower alkyl group, a lower alkylamino group, an aroylamino group, and a lower alkylsulfonylamino group,

and

(1'-2) a substituent which is a group represented by the formula  $Y_{1a}$ - $W_{1a}$ - $Y_{2a}$ - $R_{pa}$ , wherein:

R<sub>pa</sub> is:

- (i) a hydrogen atom, or
- (ii) a lower alkyl group, a lower alkenyl group or a lower alkynyl group, each of which is optionally substituted with one to three of said substituent(s) as defined in (1'-1) above; or
- (iii) a cyclo lower alkyl group, an aryl group, a heteroaromatic ring group selected from the group consisting of an imidazolyl group, an isoxazolyl group, an isoquinolyl group, an indolyl group, an ethylenedioxyphenyl group, a pyridyl group, a pyrimidinyl group, a pyridazinyl group, a pyrazolyl group, a quinolyl group, a benzoimidazolyl group, a thiazolyl group, a thienyl group, and a triazolyl group, or an aliphatic heterocyclic group(s) selected from the group consisting of an isoxazolinyl group, an isoxazolidinyl group, a tetrahydropyridyl group, a tetrahydrofuranyl group, a tetrahydropyranyl group, a piperazinyl group, a piperidinyl group, a pyrrolidinyl group, a morpholino group, and a tetrahydroisoquinolinyl group; each of which cyclic groups is optionally substituted with one to three of said substituents as defined in (1'-1) above, or furthermore, optionally has a bicyclic or tricyclic fused ring which contains a partial structure selected from the group consisting of:

$$\bigcirc$$
 ,  $\stackrel{\mathsf{N}}{\bigcirc}$  and  $\stackrel{\mathsf{O}}{\bigcirc}$ .

 $W_{1a} \ \ \text{is an oxygen atom, a sulfur atom, NR}_{qa}, \ SO_2NR_{qa}, \ N(R_{qa})SO_2, \ CONR_{qa}, \\ N(R_{qa})CO, \ N(R_{qa})COO, \ C(R_{qa})=CR_{ra}, \ OC(O), \ OC(O)NR_{qa}, \ \text{or } C(O)O, \ \text{wherein:}$ 

R<sub>qa</sub> and R<sub>ra</sub> are each independently:

- (iv) a hydrogen atom, or
- (v) a substituent selected from the group consisting of a lower alkyl group, a

cyclo lower alkyl group, a hydroxyl group, a halogen atom, a formyl group, a lower alkanoyloxy group, a hydroxy lower alkyl group, a halo lower alkyl group, a carbamoyl lower alkyl group, lower alkoxy group, a lower alkoxycarbonyl group, a lower alkoxycarbonylamino group, a lower alkylcarbamoyloxy group, an amino group, a lower alkylcarbamoyloxy group, an amino group, a lower alkylamino group, a di-lower alkylamino group, a di-lower alkylamino lower alkyl group, a lower alkylamino lower alkyl group, a lower alkylamino group, an aroylamino group, and a lower alkylsulfonylamino group; or

(vi) a lower alkyl group, an aryl group or an aralkyl group which is optionally substituted with one to three of said substituent(s) as defined in (v);

 $Y_{1a}$  and  $Y_{2a}$  are each, the same or different, a single bond or a straight-chain or branched lower alkylene group which is optionally a bicyclic or tricyclic fused ring;

or,

(2') Ar<sub>a</sub> is optionally fused to a five- to six-membered ring selected from the group consisting of:

$$\bigcirc$$
 ,  $\bigcirc$  ,  $\bigcirc$  ,  $\bigcirc$  and  $\bigcirc$ 

which ring is formed from two adjacent carbon atoms on said nitrogen-containing heteroaromatic ring group, which carbon atoms are each bonded to said ring-substituent through a carbon atom, an oxygen atom and/or a nitrogen atom of said ring-substituent selected from the group consisting of a lower alkyl group, a lower alkanoyloxy group, a hydroxy lower alkyl group, a halo lower alkyl group, a carbamoyl lower alkyl group, a lower alkoxycarbonylamino group, a lower alkoxycarbonylamino lower alkyl group, a lower alkylcarbamoyl group, a lower alkylcarbamoyl group, a lower

alkylcarbamoyloxy group, a lower alkylamino group, a di-lower alkylamino group, an amino lower alkyl group, a lower alkylamino lower alkyl group, a di-lower alkylamino lower alkyl group, a lower alkanoylamino group, and an aroylamino group;

or,

(3') Ar<sub>a</sub> is optionally fused to a five- to six-membered ring selected from the group consisting of:

$$\bigcirc$$
 ,  $\bigcirc$  ,  $\bigcirc$  ,  $\bigcirc$  and  $\bigcirc$ 

which ring is formed by two adjacent carbon atoms of said nitrogen-containing heteroaromatic ring group, which carbon atoms are each bonded to the ring-substituent through a carbon atom, an oxygen atom and/or a nitrogen atom of said ring-substituent represented by the formula  $Y_{1a}$ - $W_{1a}$ - $Y_{2a}$ - $R_{pa}$ , wherein  $Y_{1a}$ ,  $W_{1a}$ ,  $Y_{2a}$  and  $R_{pa}$  have the same meanings as stated above;

wherein the 1,3-oxazine ring of the compound of Formula (I-a) is optionally further fused with a cyclo lower alkyl group, an aryl group, a heteroaromatic ring group selected from the group consisting of a pyridyl group and a pyrazolyl group, and an aliphatic heterocyclic group selected from the group consisting of a piperidinyl group and a pyrrolidinyl group;

and wherein the 1,3-oxazine ring of the compound of Formula (I-a) is optionally substituted with one to three of the same or different substituent(s) selected both from the group consisting of a lower alkyl group, a spiro cyclo lower alkyl group which is optionally substituted, a hydroxy group, a hydroxy lower alkyl group, a lower alkoxy group, a lower alkoxycarbonylamino group, a lower alkoxycarbonylamino lower alkyl group, a lower alkylcarbamoyl group, a lower

alkylcarbamoyloxy group, a lower alkylamino group, a di-lower alkylamino group, an amino lower alkyl group, a lower alkylamino lower alkyl group, a di-lower alkylamino lower alkyl group, a lower alkanoylamino group and an aroylamino group, and the group represented by the formula  $Y_{1a}$ - $W_{1a}$ - $Y_{2a}$ - $R_{pa}$ , wherein  $R_{pa}$ ,  $W_{1a}$ ,  $Y_{1a}$  and  $Y_{2a}$  have the same meanings as stated above, or furthermore,

 $R_{4a}$  and  $R_{5a}$  are each, the same or different, a hydrogen atom or a substituent consisting of a halogen atom, a hydroxy group, an amino group, or a group represented by the formula  $Y_{3a}$ - $W_{2a}$ - $Y_{4a}$ - $R_{5a}$ 

### wherein:

 $R_{sa}$  is a hydrogen atom; a lower alkyl group, a lower alkenyl group, a cyclo lower alkyl group, an aryl group; or a heteroaromatic ring group selected from the group consisting of an indolyl group, or an aliphatic heterocyclic group selected from the group consisting of a tetrahydropyridyl group, a piperadinyl group, a piperidinyl group, a pyrrolidinyl group and a morpholino group; each of which groups is optionally substituted with one to three of the same or different said substituent(s) as defined in (1'-1) above;

 $W_{2a}$  is a single bond ,  $NR_{ta}$ ,  $CH(OR_{ta})$ ,  $CONR_{ta}$ ,  $N(R_{ta})CO$ ,  $N(R_{ta})COO$ ,  $OC(O)NR_{ta}$  or C(O)O, wherein:

 $R_{ta}$  is a hydrogen atom, a lower alkyl group, an aryl group or an aralkyl group which is optionally substituted with one to three of said substituent(s) as defined in (1'-1) above;

 $Y_{3a}$  and  $Y_{4a}$  are each, the same or different, a single bond, or a straight-chain or branched lower alkylene group; or

a substituent selected from the group consisting of a lower alkyl group, an aryl group or

an aralkyl group, each of which is optionally substituted with one to three of the same or different substituent(s) selected from the group consisting of a lower alkyl group, a hydroxy lower alkyl group, a halo lower alkyl group, a lower alkoxycarbonylamino group, a lower alkoxycarbonylamino lower alkyl group, a lower alkylamino group, a lower alkylamino group, a lower alkylamino lower alkyl group, a lower alkanoylamino group, and an aroylamino group, and the group represented by the formula  $Y_{3a}$ - $W_{2a}$ - $Y_{4a}$ - $R_{5a}$ , wherein  $R_{5a}$ ,  $W_{2a}$ ,  $Y_{3a}$  and  $Y_{4a}$  have the same meanings as stated above.

23. (New) The compound according to claim 21, having a structure of Formula (I-b) or a pharmaceutically acceptable salt thereof,

Formula (I-b)

wherein  $Ar_b$  is a nitrogen-containing heteroaromatic ring group selected from the group consisting of a pyridyl group and a pyrazolyl group;

wherein:

(1") Ar<sub>b</sub> is optionally substituted with one to three substituent(s) selected from (1"-1) and (1"-2):

(1"-1) a substituent selected from the group consisting of a hydroxy group, a halogen atom, a lower alkanoyloxy group, a hydroxy lower alkyl group, a lower alkoxy group, a lower alkoxycarbonyl group, an amino group, and a lower alkylamino lower alkyl group,

and

(1''-2) a substituent which is a group represented by the formula  $Y_{1b}$ - $W_{1b}$ - $Y_{2b}$ -  $R_{pb}$ , wherein:

R<sub>pb</sub> is:

- (i) a hydrogen atom, or
- (ii) a lower alkyl group, a lower alkenyl group or a lower alkynyl group which is optionally substituted with one to three of said substituent(s) as defined in (1"-1) above; or
- (iii) a cyclo lower alkyl group, an aryl group, a heteroaromatic ring group selected from the group consisting of a pyridyl group and a pyrazolyl group, or an aliphatic heterocyclic group selected from the group consisting of an isoxazolinyl group, a tetrahydropyridyl group, a piperadinyl group, a piperidinyl group, a pyrrolidinyl group, a morpholino group and a tetrahydroisoquinolinyl group; each of which cyclic substituent groups is optionally substituted with one to three of said substituent(s) as defined in (1"-1) above, or furthermore, optionally has a bicyclic or tricyclic fused ring, which contains the partial structure of which is selected from the group consisting of:

$$\bigcap$$
 ,  $\bigcap$  and  $\bigcap$  ;

 $W_{1b}$  is  $NR_{qb}$ ,  $N(R_{qb})SO_2$ ,  $CONR_{qb}$ ,  $N(R_{qb})CO$ ,  $N(R_{qb})COO$ , OC(O), or C(O)O, wherein:

R<sub>qb</sub> is:

(iv) a hydrogen atom, or

(v) a substituent selected from the group consisting of a hydroxy group, a halogen atom, a cyclo lower alkyl group, a lower alkanoyloxy group, a hydroxy lower alkyl group, a lower alkoxy group, a lower alkoxycarbonyl group, an amino group, and a lower alkylamino lower alkyl group; or a lower alkyl group, an aryl group or an aralkyl group, each of which is optionally substituted with one to three of said substituent(s);

Y<sub>1b</sub> and Y<sub>2b</sub> are each, the same or different, a single bond or a straight-chain or branched lower alkylene group which may have said bicyclic or tricyclic fused ring;

or

(2") Ar<sub>b</sub> is optionally fused to a five- or six-membered ring selected from the group consisting of:

$$\bigcirc$$
 ,  $\bigcirc$  ,  $\bigcirc$  ,  $\bigcirc$  and  $\bigcirc$ 

which ring is formed by two adjacent carbon atoms of said nitrogen-containing heteroaromatic ring group, which carbon atoms are each bonded to the ring-substituent through a carbon atom, an oxygen atom and/or a nitrogen atom of said ring-substituent selected from the group consisting of a lower alkanoyloxy group, a hydroxy lower alkyl group, a lower alkoxy group, a lower alkoxy group and a lower alkylamino lower alkyl group;

or,

(3") Ar<sub>b</sub> is optionally fused to a five- or six-membered ring selected from the group consisting of:

$$\bigcirc$$
 ,  $\bigcirc$  ,  $\bigcirc$  ,  $\bigcirc$  and  $\bigcirc$ 

which ring is formed by two adjacent carbon atoms of said nitrogen-containing heteroaromatic ring group, which carbon atoms are each bonded to the ring-substituent through a carbon atom, an oxygen atom and/or a nitrogen atom of said ring-substituent represented by the formula  $Y_{1b}$ - $W_{1b}$ - $Y_{2b}$ - $R_{pb}$ , wherein  $Y_{1b}$ ,  $W_{1b}$ ,  $Y_{2b}$  and  $R_{pb}$  have the same meanings as stated above;

Y<sub>b</sub> is a CO, SO or SO<sub>2</sub>;

wherein the 1,3-oxazine ring of the compound of Formula (I-b) is optionally further fused with a cyclo lower alkyl group, an aryl group and an aliphatic heterocyclic group selected from the group consisting of a piperidinyl group and a pyrrolidinyl group,

and the 1,3-oxazine ring of the compound of Formula (I-b) is optionally substituted with one to three of the same or different substituent(s) selected from the group consisting of a lower alkyl group, a spiro cyclo lower alkyl group which is optionally substituted, a hydroxy lower alkyl group and a lower alkoxycarbonyl group, or a group represented by the formula  $Y_{1b}$ - $W_{1b}$ - $Y_{2b}$ - $R_{pb}$ , wherein  $R_{pb}$ ,  $W_{1b}$ ,  $Y_{1b}$  and  $Y_{2b}$  have the same meanings as stated above;

 $R_{4b}$  and  $R_{5b}$  are each independently, the same or different, or a lower alkyl group, an aryl group or an aralkyl group which is optionally substituted with one to three of the same or different substituent(s) selected from the group consisting of a hydrogen atom, a halogen atom and a substituent represented by the formula  $Y_{3b}$ - $W_{2b}$ - $Y_{4b}$ - $R_{sb}$ ,

wherein:

R<sub>sb</sub> is a hydrogen atom or a lower alkyl group, a cyclo lower alkyl group, and an aryl group, which is optionally substituted with one to three of said substituent(s);

 $W_{2b}$  is a single bond,  $N(R_{tb})COO$  or C(O)O, wherein  $R_{tb}$  is a hydrogen atom or a lower alkyl group, an aryl group or an aralkyl group which is optionally substituted with one to

three of said substituent(s);,

 $Y_{3b}$  and  $Y_{4b}$  are each, the same or different, a single bond, or a straight-chain or branched lower alkylene group, or a lower alkyl group which is optionally substituted with one to three of the same or different substituent(s) selected from the group consisting of a hydroxy lower alkyl group and a group represented by the formula  $Y_{3b}$ - $W_{2b}$ - $Y_{4b}$ - $R_{sb}$ , wherein  $R_{sb}$ ,  $W_{2b}$ ,  $Y_{3b}$  and  $Y_{4b}$  have the same meanings as stated above, or a substituent selected from the group consisting of a lower alkyl group, a hydroxy lower alkyl group, a halo lower alkyl group, a lower alkoxycarbonylamino group, a lower alkoxycarbonylamino lower alkyl group, a lower alkylamino group, a lower alkylamino group, a lower alkylamino group, a lower alkylamino group, and an aroylamino group.

**24.** (New) A compound which has a structure of Formula (I-p) or a pharmaceutically acceptable salt thereof,

Formula (I-p)

$$O \xrightarrow{N} HN \xrightarrow{H} Ar_p (I-p)$$

$$R_{4p} R_{5p}$$

wherein Ar<sub>p</sub> is a nitrogen-containing heteroaromatic ring group which is optionally substituted, wherein said nitrogen-containing heteroaromatic ring group does not include a quinolyl group,

wherein the 1,3-oxazine ring of Formula (I-p) is optionally further fused with a cyclo lower alkyl group,

and the 1,3-oxazine ring of Formula (I-p) is optionally substituted,

 $R_{4p}$  and  $R_{5p}$  are each, the same or different, a hydrogen atom, halogen atom, a hydroxy group, an amino group or a lower alkyl group, an aryl group or an aralkyl group which is

optionally substituted.

VI 11 4

# 25. (New) A compound which is:

N'-(isoindolino[2,3-b]perhydro-1,4-methano-6,11a-benzoxazin-11-on-7-yl)-N-(pyridin-2- yl)urea,

e (1, .

N'-(isoindolino[2,3-c]perhydro-5,10a-benzoxazin-10-on-6-yl)-N-(pyridin-2-yl)urea,

N'-(isoindolino[2,3-c]perhydro-5,10a-benzoxazin-10-on-6-yl)-N-(4-(N-benzylpyrrolidin-3-yl)pyridin-2-yl)urea,

N'-(isoindolino[2,3-b]perhydro-1,4-methano-6,11a-benzoxazin-11-on-7-yl)-N-(4-(N-benzylpyrrolidin-3-yl)urea,

N'-(4-phenylisoindolino[3,2-b]perhydro-1,3-oxazin-5-on-9-yl)-N-(pyridin-2-yl)urea,

N'-(isoindolino[3,2-b]perhydro-1,3-oxazin-5-on-9-yl)-N-(pyridin-2-yl)urea,

N'-(4-phenylisoindolino[3,2-b]perhydro-1,3-oxazin-5-on-9-yl)-N-(4-(N-benzylpyrrolidin-3-yl)pyridin-2-yl)urea,

N'-(isoindolino[3,2-b]perhydro-1,3-oxazin-5-on-9-yl)-N-(4-(N-benzylpyrrolidin-3-yl)pyridin-2-yl)urea,

N'-(2-methylisoindolino[3,2-b]perhydro-1,3-oxazin-5-on-9-yl)-N-(pyridin-2-yl)urea,

N'-(2,3-dimethylisoindolino[3,2-b]perhydro-1,3-oxazin-5-on-9-yl)-N-(pyridin-2-yl)urea,

N'-(2-methylisoindolino[3,2-b]perhydro-1,3-oxazin-5-on-9-yl)-N-(4-(N-

benzylpyrrolidin-3-yl)pyridin-2-yl)urea,

N'-(2,3-dimethylisoindolino[3,2-b]perhydro-1,3-oxazin-5-on-9-yl)-N-(4-(N-benzylpyrrolidin-3-yl)pyridin-2-yl)urea,

N'-(2,3-dimethylisoindolino[3,2-b]perhydro-1,3-oxazin-5-on-9-yl)-N-(4-bromoindan-2-yl-aminomethyl)urea,

N'-(2-methylisoindolino[3,2-b]perhydro-1,3-oxazin-5-on-9-yl)-N-(4-bromoindan-2-yl-aminomethyl)urea,

or

N'-(10-propylisoindolino[3,2-b]perhydro-1,3-oxazin-5-on-9-yl)-N-(4-(N-benzylpyrrolidin-3-yl)pyridin-2-yl)urea,

or

a pharmaceutically acceptable salt thereof.

- **26.** (New) A pharmaceutical composition comprising a therapeutically effective amount of the compound of claim 21 or a pharmaceutically acceptable salt thereof together with a pharmaceutically acceptable additive.
- 27. (New) A method for inhibiting cyclin dependent kinase, which comprises administering a therapeutically effective amount of the compound of claim 21 or a pharmaceutically acceptable salt thereof to a patient in need thereof.
- **28.** (New) A method for cancer treatment which comprises administering therapeutically effective amount of the compound of claim 21 or a pharmaceutically acceptable salt thereof to a patient in need thereof.